

AMENDMENT

In the claims

Please cancel claims 4, 5, and 7-11. Please replace claims 6 and 12-14 with the following claims:

1. A method of making an oligonucleotide, the method comprising:

providing a template oligonucleotide comprising a sequence of nucleotides, the template comprising at least one non-standard nucleotide at a preselected site in the sequence;

contacting the template with a mixture of nucleotide triphosphates, the mixture comprising nucleotide triphosphates that are complementary to the nucleotides of the template, wherein the nucleotide triphosphate complementary to the non-standard nucleotide at the preselected site comprises a derivatized nucleotide; and

forming an oligonucleotide complementary to a portion of the template by enzymatic polymerization of the nucleotide triphosphates in a sequence complementary to the portion of the template, wherein the non-standard nucleotide at the preselected site is iso-G or iso-C.

2. A method of making an oligonucleotide, the method comprising:

providing a template oligonucleotide comprising a sequence of nucleotides, the template comprising at least one non-standard nucleotide at a preselected site in the sequence;

contacting the template with a mixture of nucleotide triphosphates, the mixture comprising nucleotide triphosphates that are complementary to the nucleotides of the template, wherein the nucleotide triphosphate complementary to the non-standard nucleotide at the preselected site comprises a derivatized nucleotide; and

forming an oligonucleotide complementary to a portion of the template by enzymatic polymerization of the nucleotide triphosphates in a sequence complementary to the portion of the template, wherein the enzymatic polymerization

F ^{is performed with}
1 ~~comprises~~ a DNA polymerase selected from the group consisting of AMV reverse transcriptase, ~~T4 DNA polymerase~~, and Klenow fragment of DNA polymerase I.

F ³ 13. The method of claim ² 12, wherein the ~~DNA~~ polymerase ^{is} ~~comprises~~ Klenow fragment of DNA polymerase I.

⁴ 14. A method of making an oligonucleotide, the method comprising:

providing a template oligonucleotide comprising a sequence of nucleotides, the template comprising at least one non-standard nucleotide at a preselected site in the sequence;

contacting the template with a mixture of nucleotide triphosphates, the mixture comprising nucleotide triphosphates that are complementary to the nucleotides of the template, wherein the nucleotide triphosphate complementary to the non-standard nucleotide at the preselected site comprises a derivatized nucleotide comprising a radiolabel; and

forming an oligonucleotide complementary to a portion of the template by enzymatic polymerization of the nucleotide triphosphates in a sequence

complementary to the portion of the template, wherein the enzymatic polymerization
F ^{is performed with}
1 ~~comprises~~ T7 RNA polymerase.